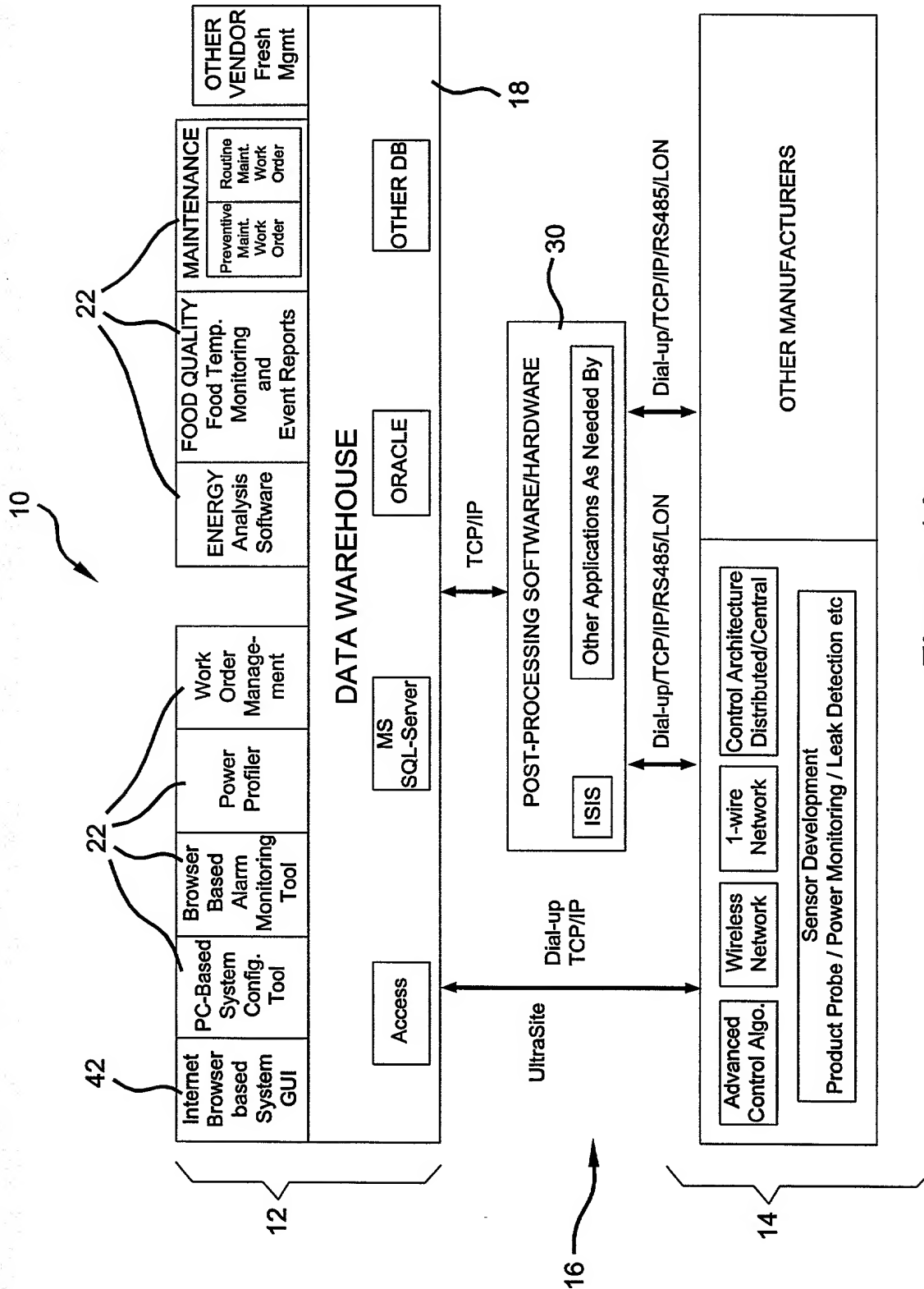


1/35



2/35

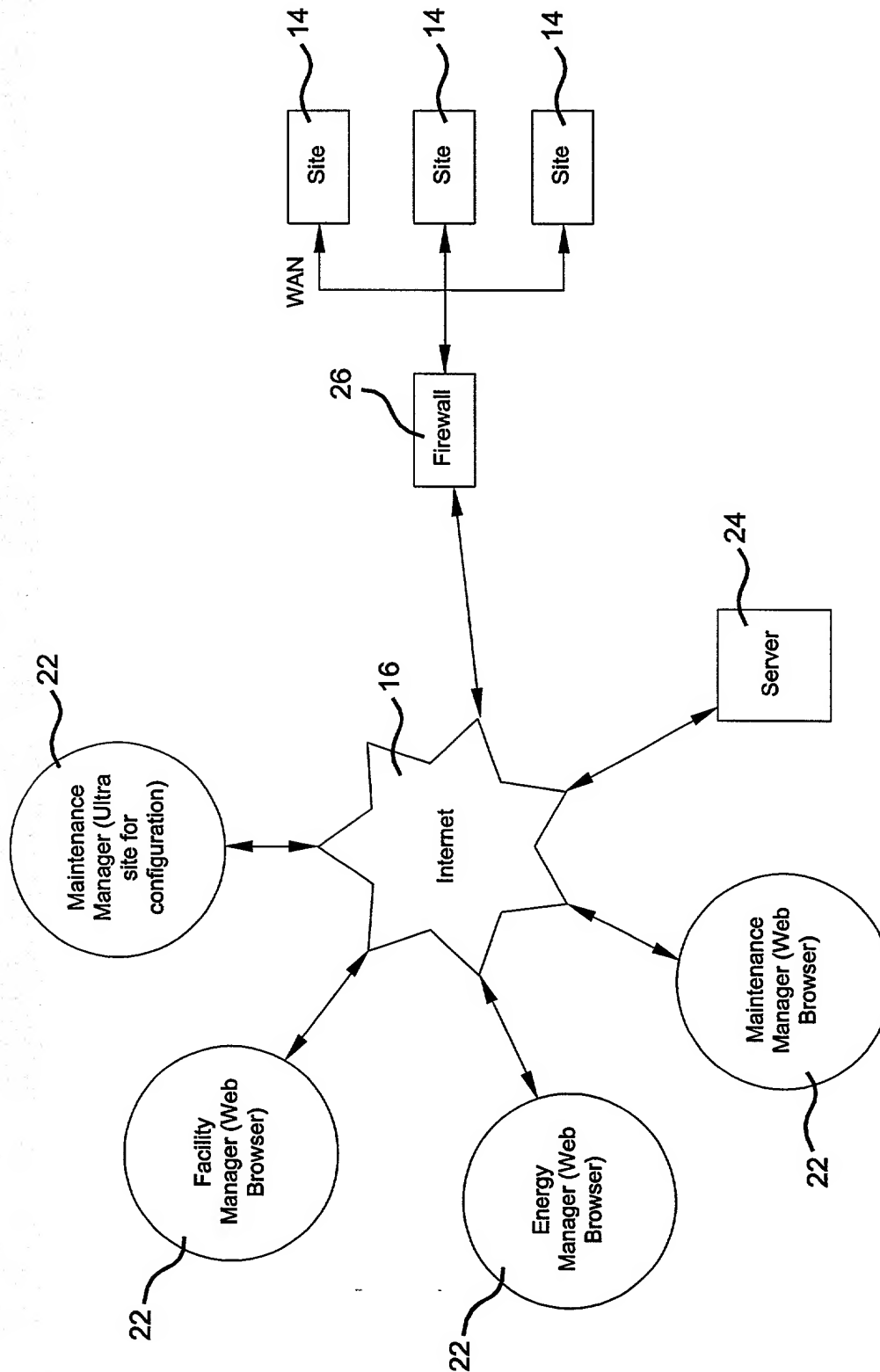


Figure 1B

3/35

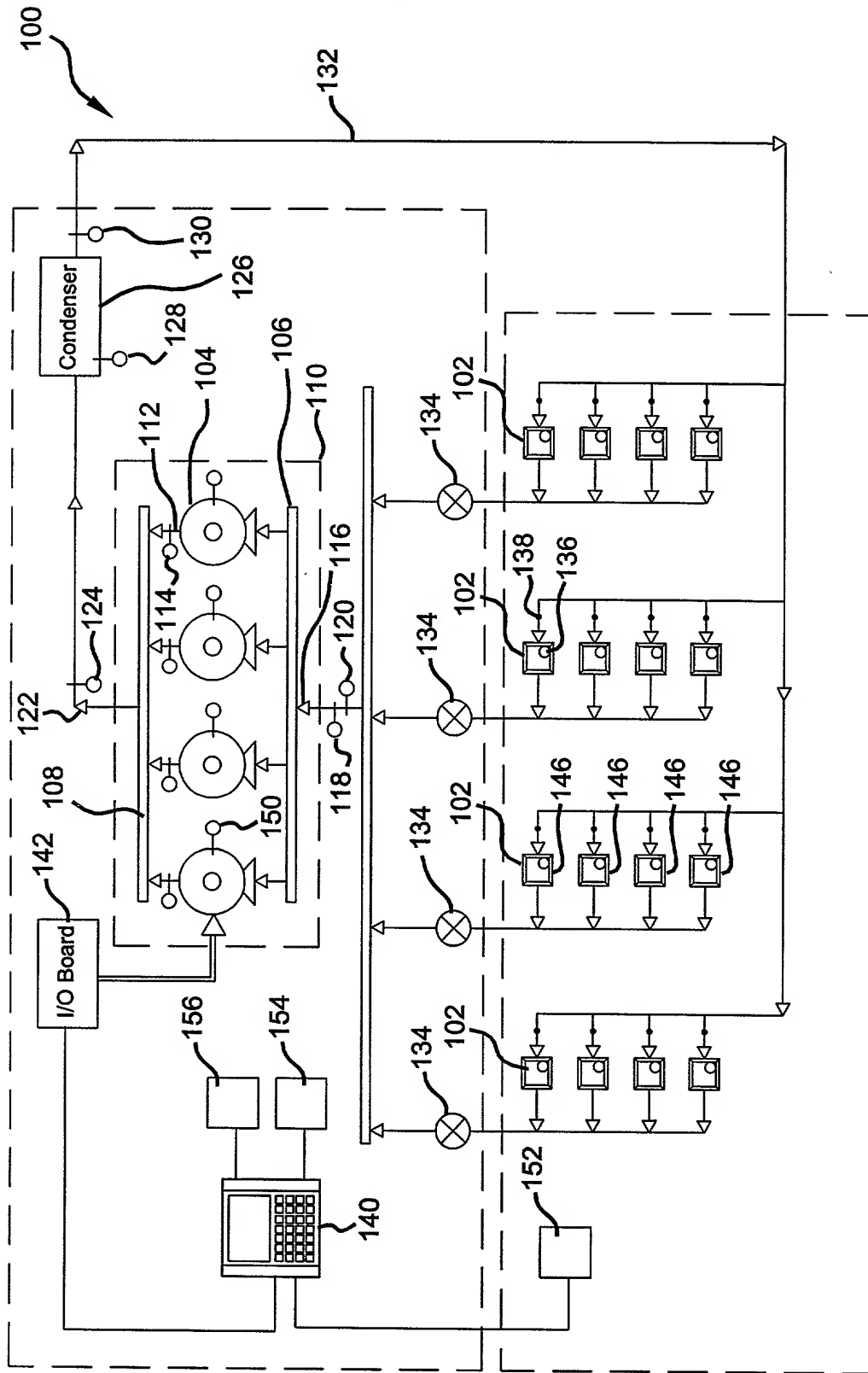


Figure 2

4/35

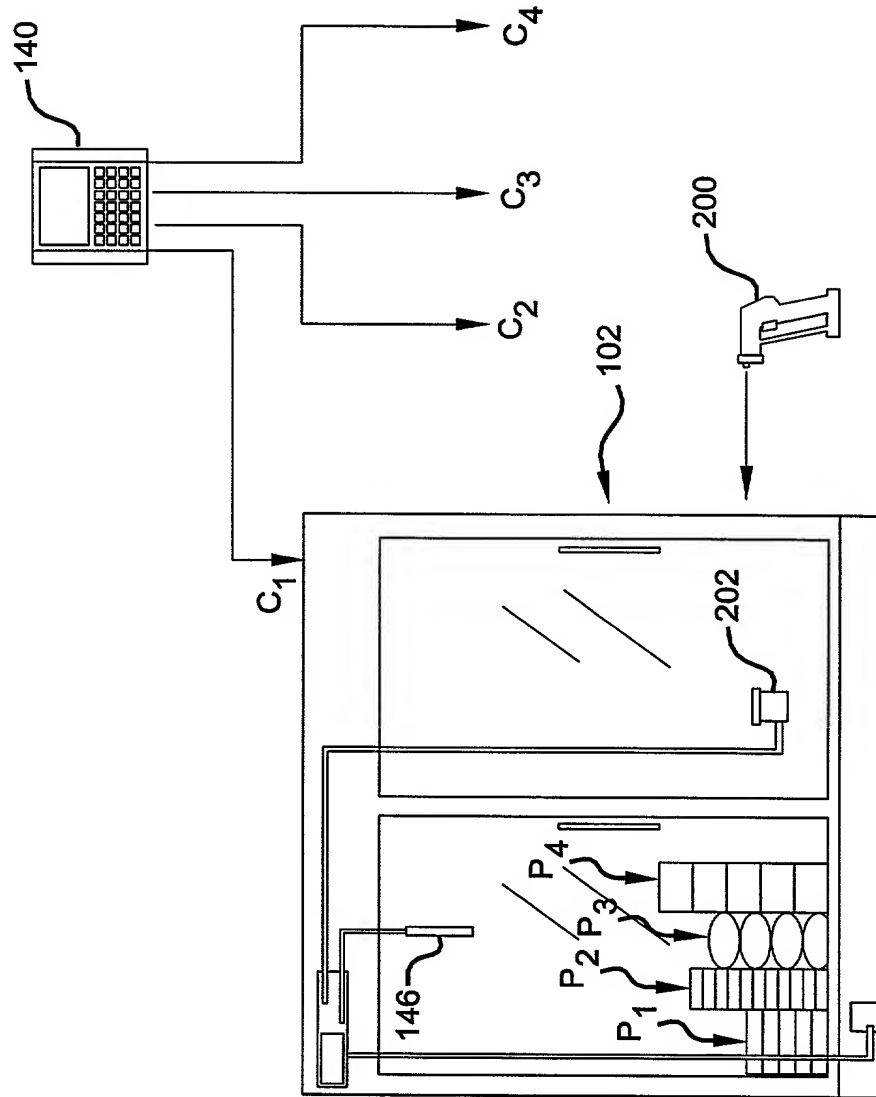


Figure 3

5/35

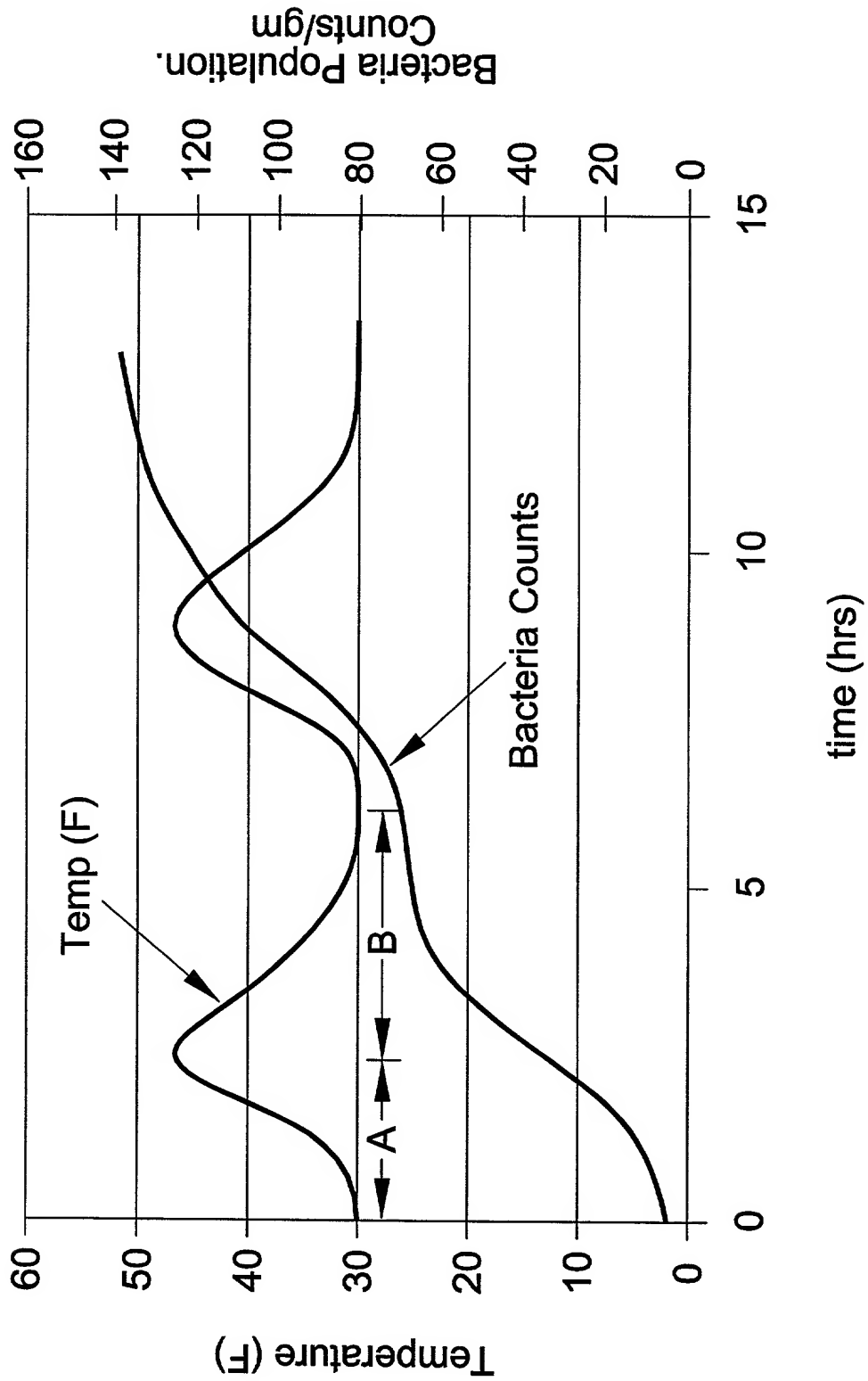


Figure 4

6/35

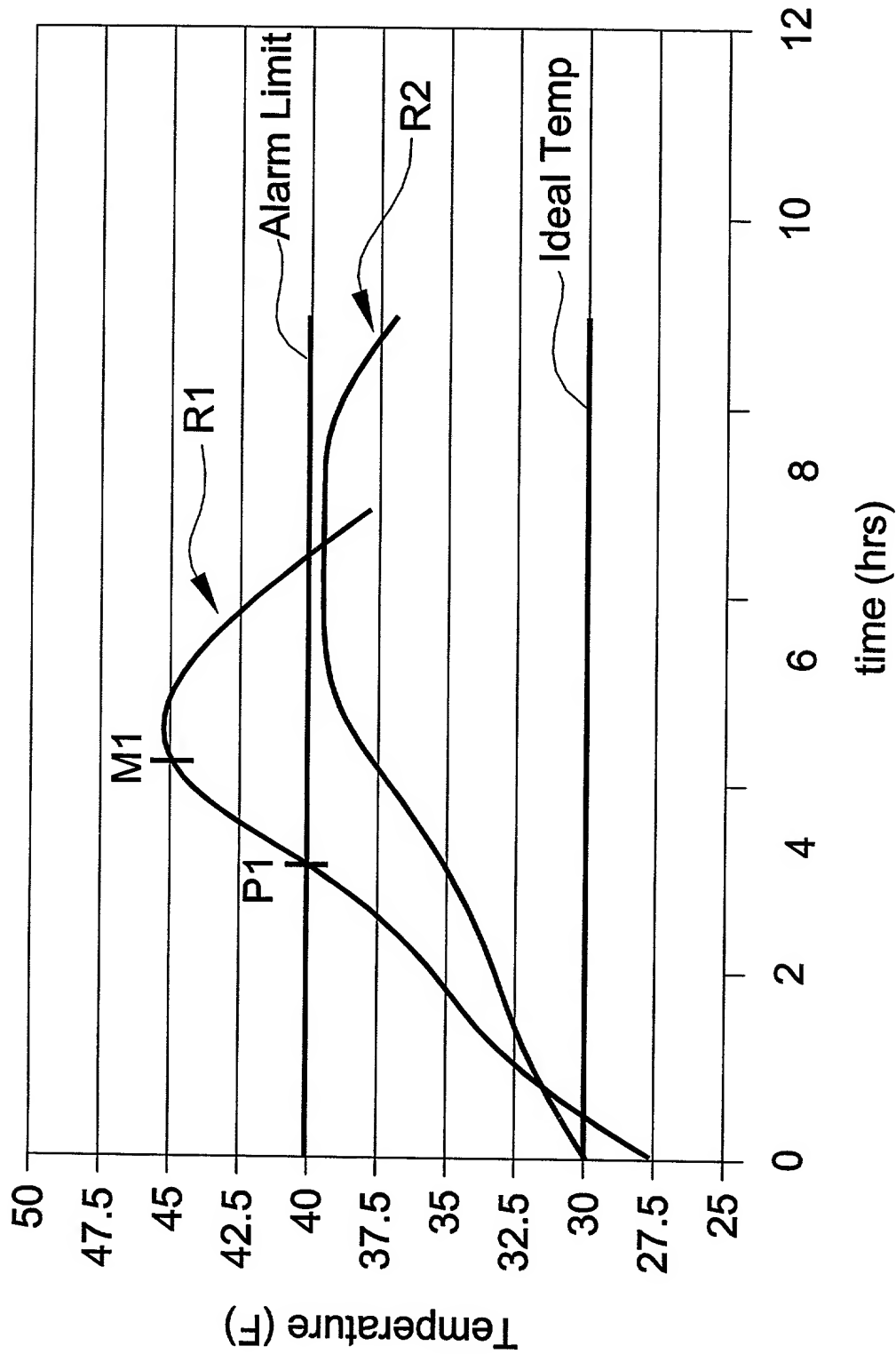


Figure 5

7/35

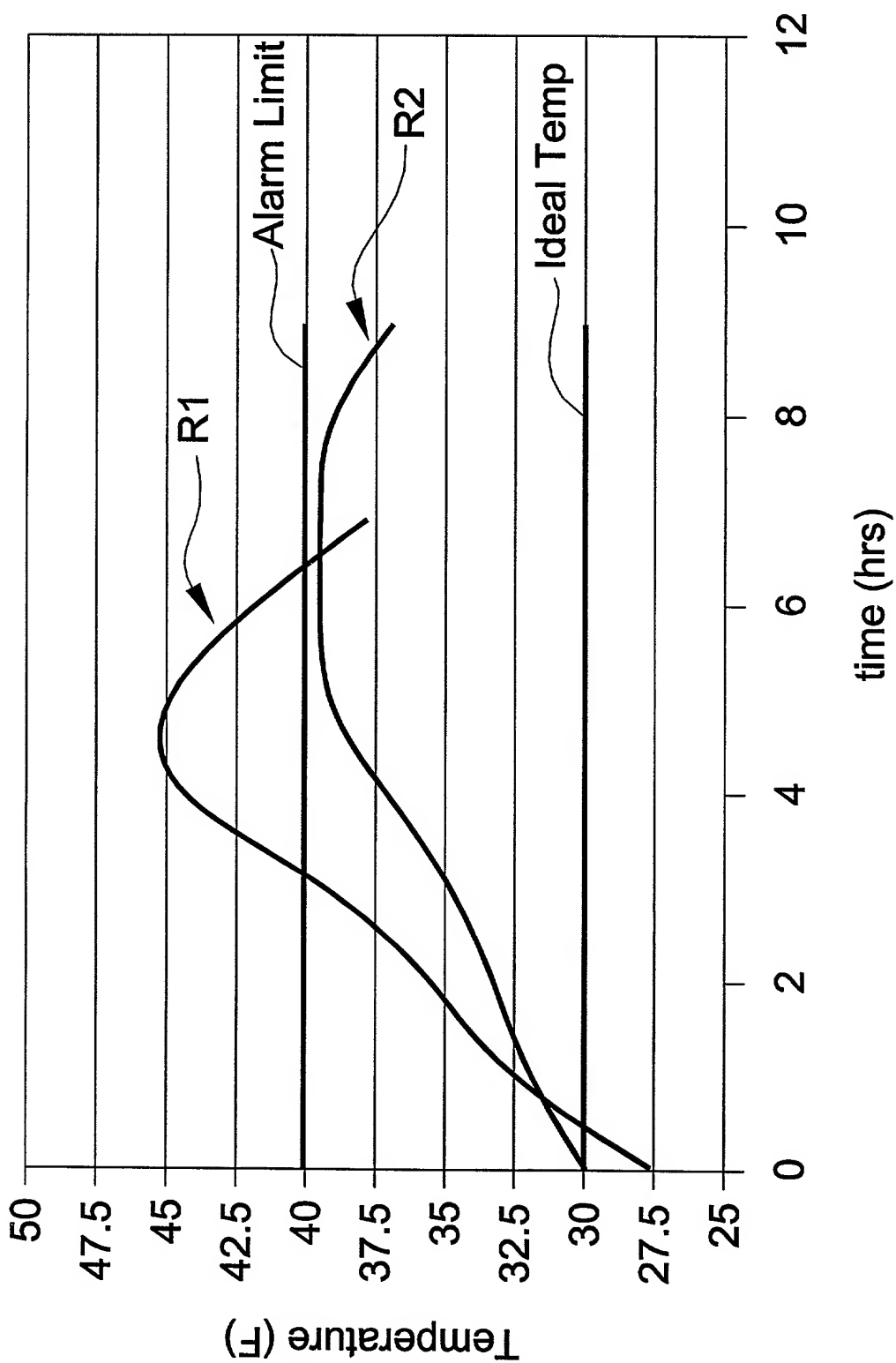


Figure 6

8/35

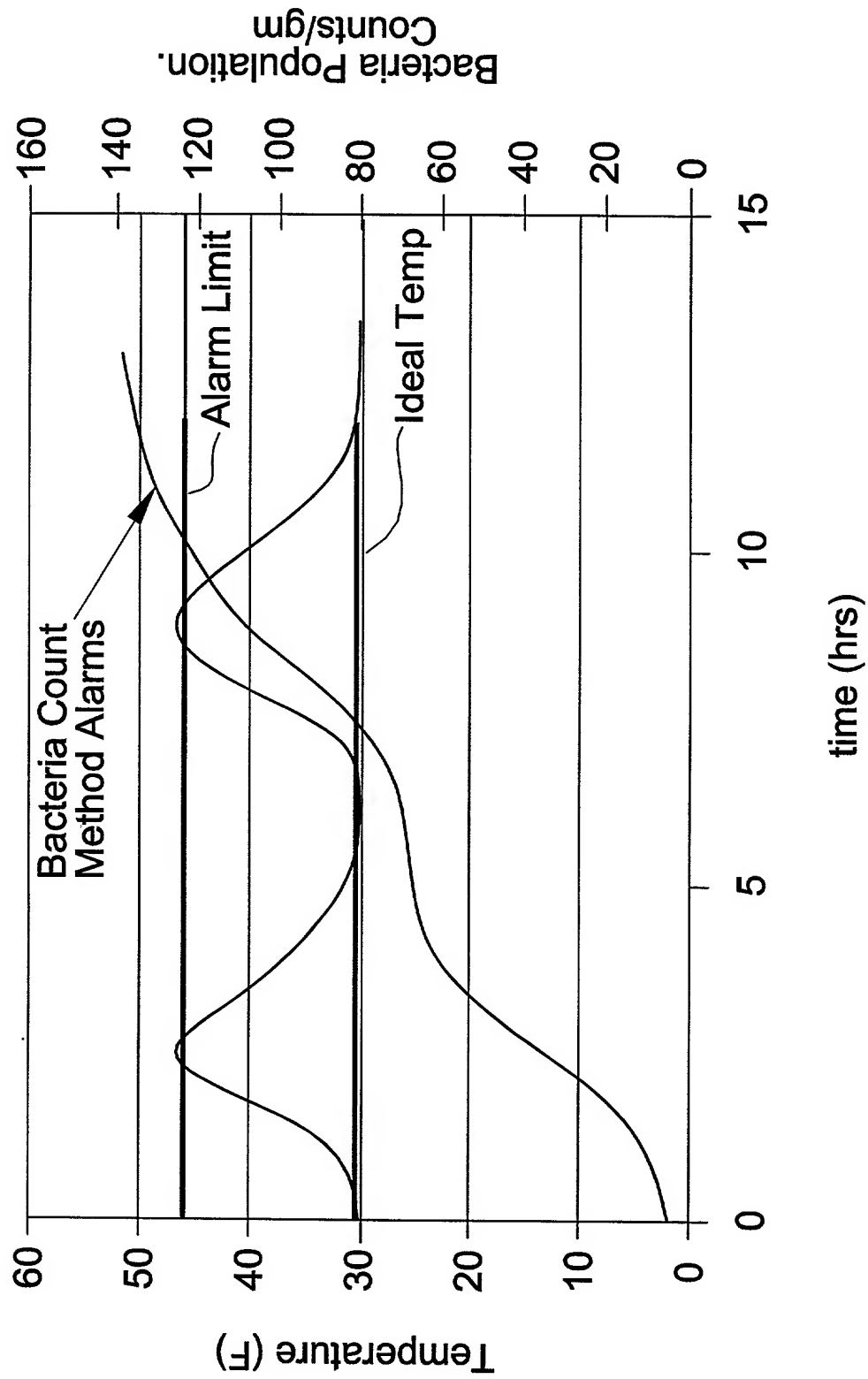


Figure 7

9/35

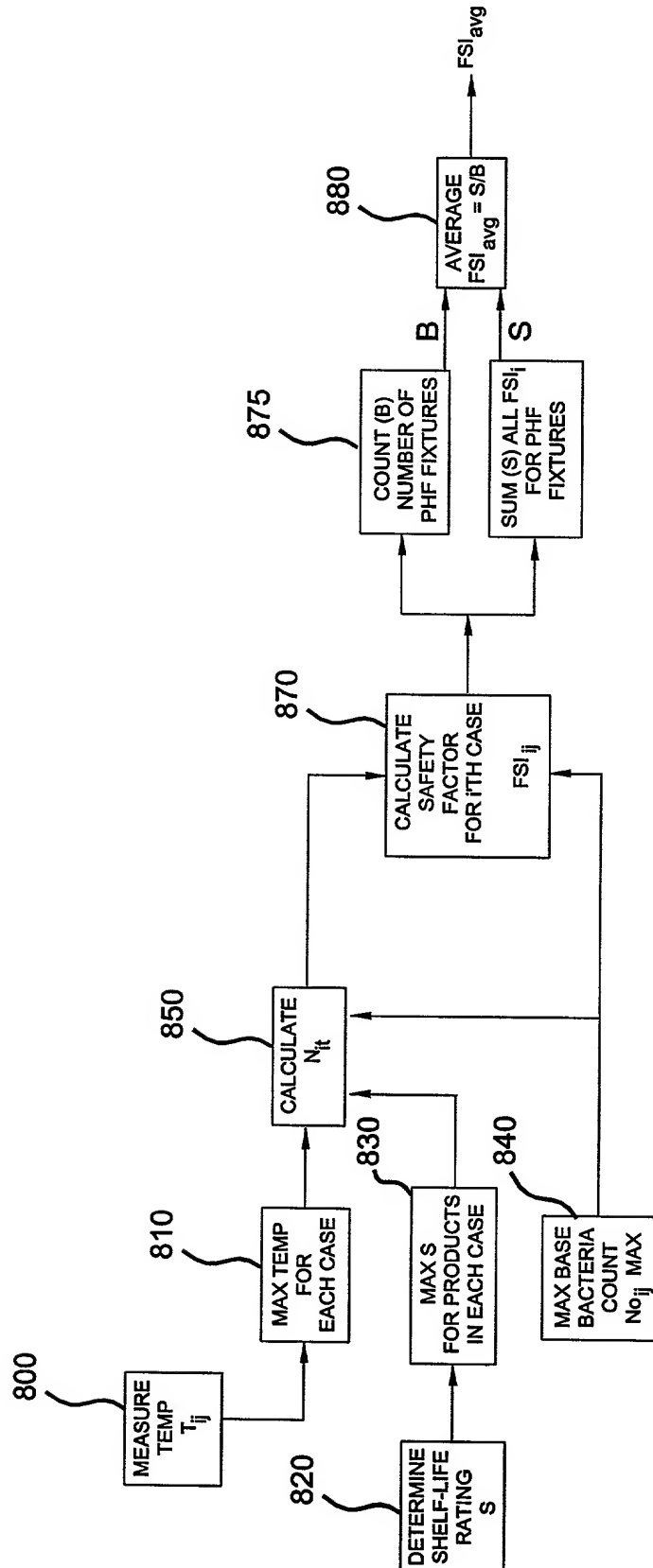


Figure 8

10/35

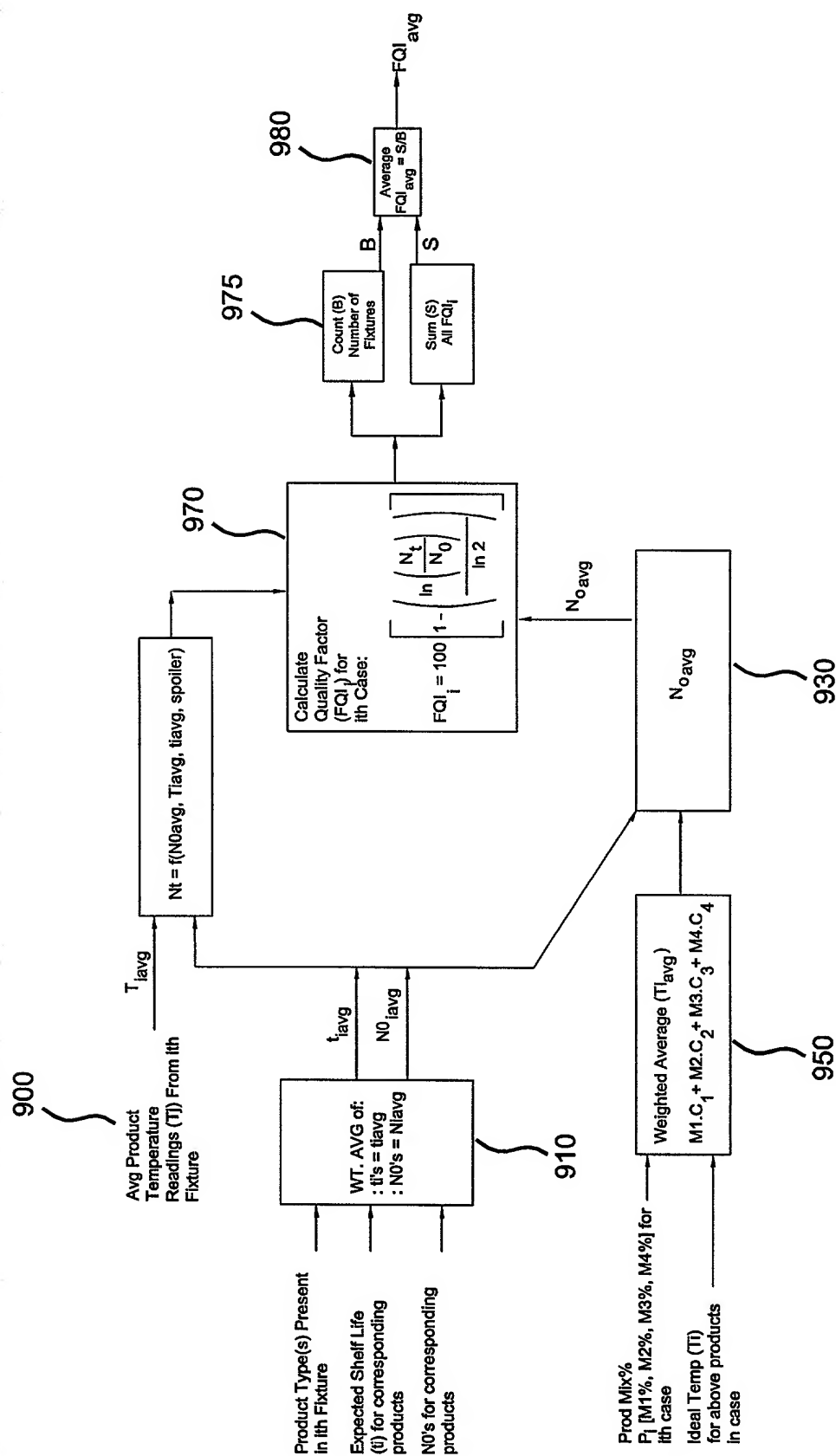


Figure 9

11/35

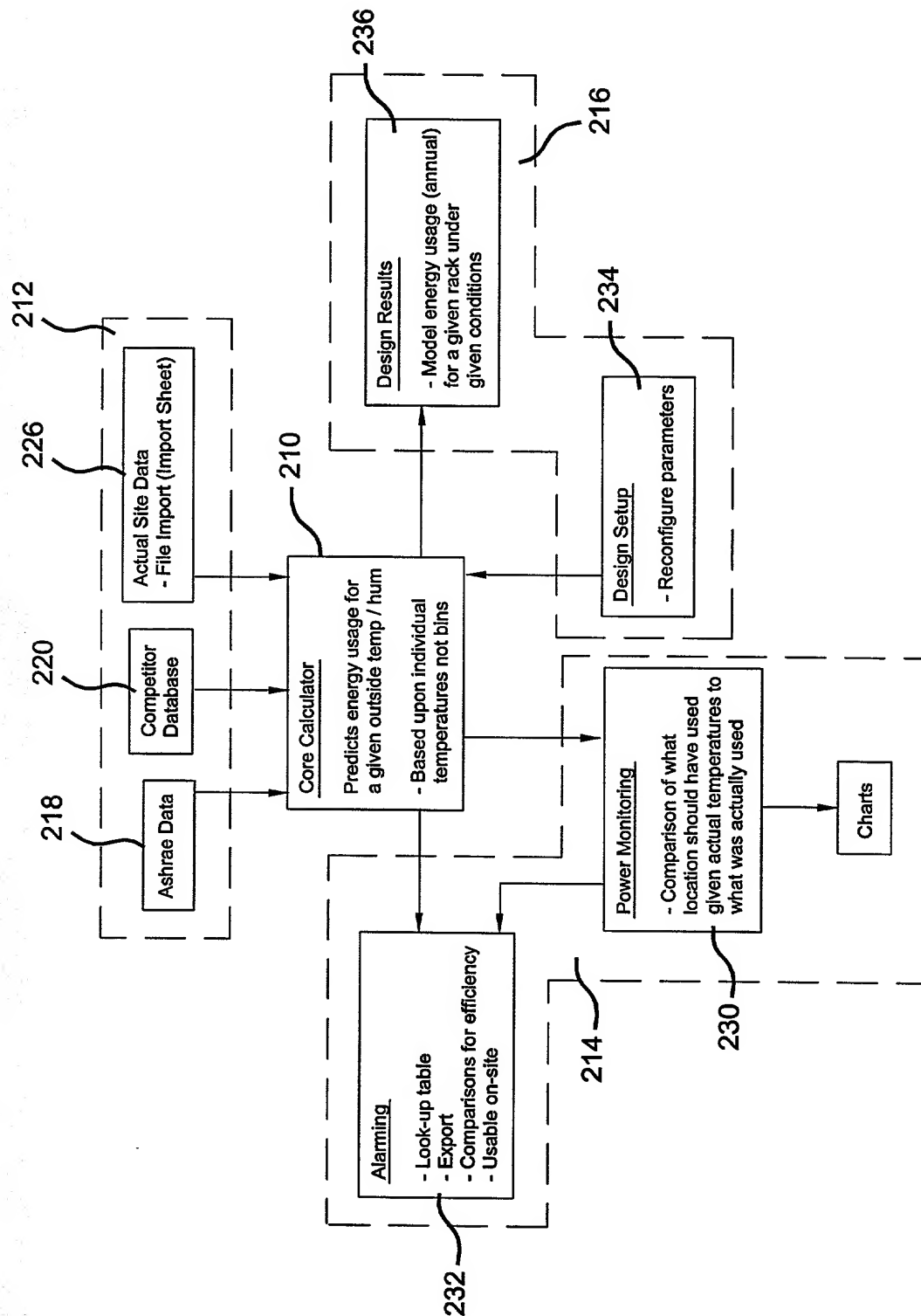


Figure 10

Figure 11

13/35

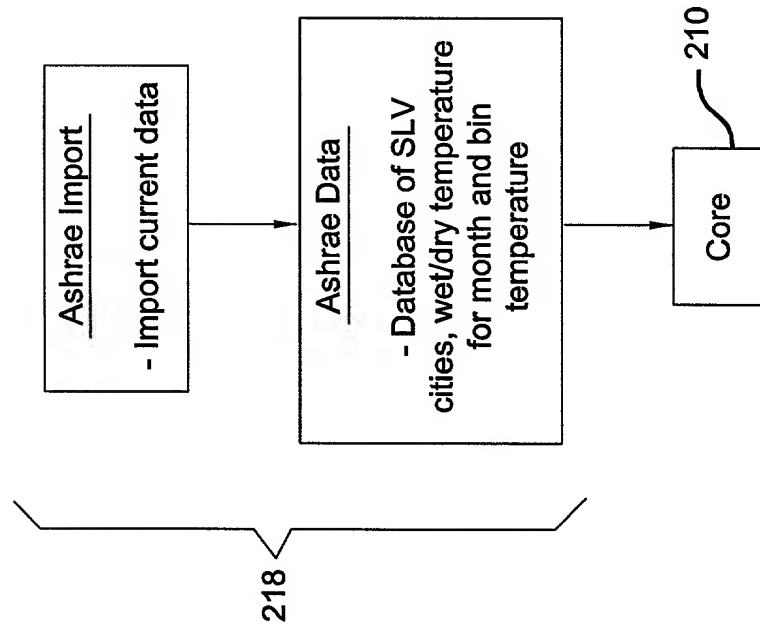


Figure 12

14/35

		DO NOT CHANGE.... THIS PAGE IS POSITION DEPENDENT AND USED TO IMPORT NEW ASHRAE DATA !!!!																									
WYEC-2 site NMALBUQW.WY2 (Albuquerque, New Mexico)																											
Latitude: 35.05 Longitude: -106.62																											
quantity	WYEC2 wetbulb																										
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	744
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	672
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	744
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	720
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	744
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	720
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	744
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	744
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	720
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	744
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	744
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	744
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8760

Figure 13

15/35

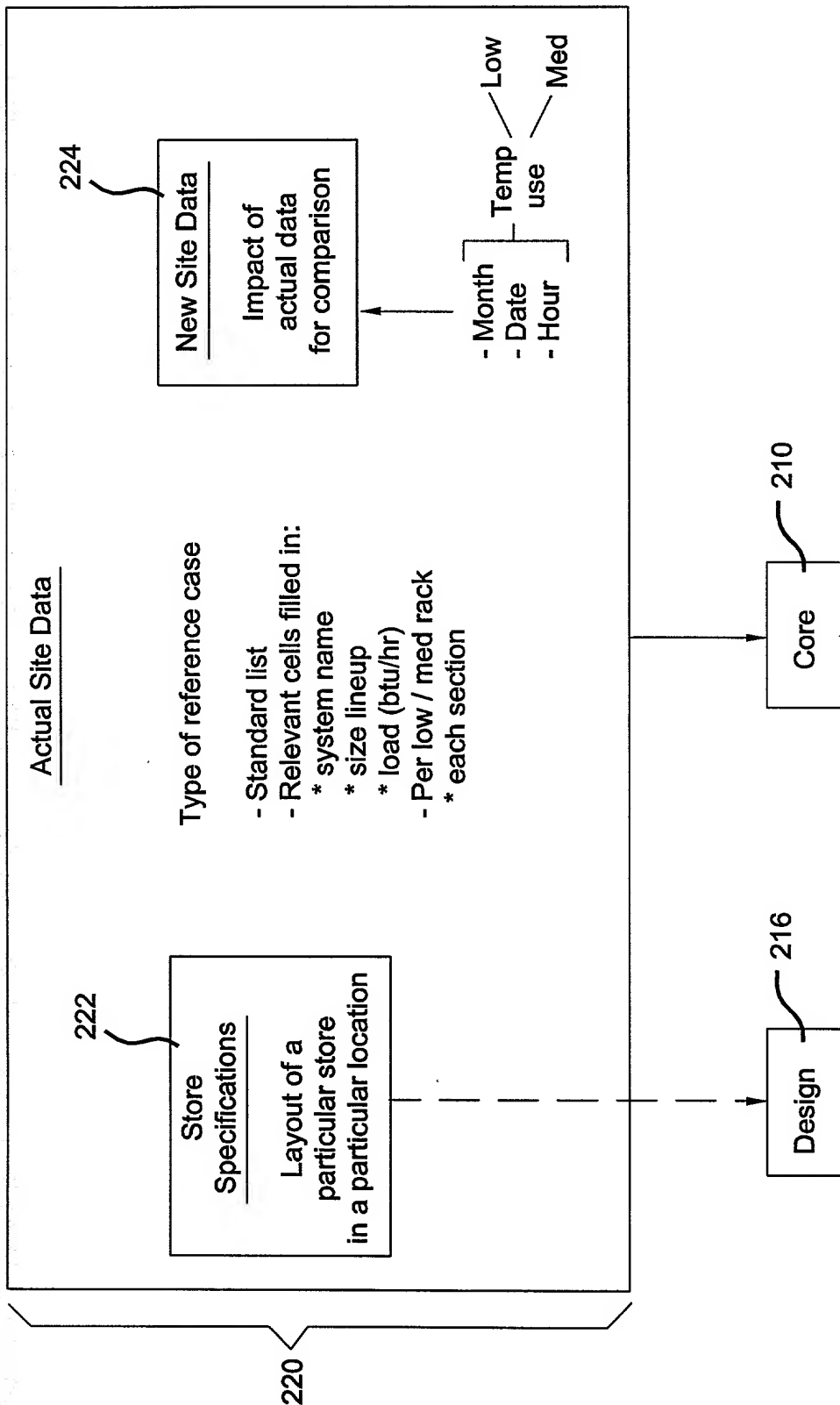


Figure 14

[illegible]

17/35

DO NOT CHANGE... USED FOR ACTUAL DATA ... may be position dependent										ACTUAL DAY BY DAY, HOUR BY HOUR DATA FOR 24 HOUR PERIOD				
ACTUAL DAY BY DAY, HOUR BY HOUR DATA														
Data must be sorted by date and hour														
kwmnth	kwdate	kwhour	temp	kwuselt	kwusemt	Storepop	kwdate	kwhour	temp	kwuselt	kwusemt	Storepop		
1	01/18/01	1.0	44.8	40.8	43.0	2.0	1/18/01	1	39	39	43	2		
1	01/18/01	2.0	44.8	40.8	43.0	2.0	1/18/01	2	39	39	43	2		
1	01/18/01	3.0	44.8	40.8	43.0	2.0	1/18/01	3	39	39	43	2		
1	01/18/01	4.0	44.8	40.8	43.0	2.0	1/18/01	4	39	39	43	2		
1	01/18/01	5.0	44.8	40.8	43.0	2.0	1/18/01	5	39	39	43	2		
1	01/18/01	6.0	44.8	40.8	43.0	2.0	1/18/01	6	39	39	43	2		
1	01/18/01	7.0	44.8	40.8	43.0	2.0	1/18/01	7	39	39	43	2		
1	01/18/01	8.0	44.8	40.8	43.0	2.0	1/18/01	8	39	39	43	2		
1	01/18/01	9.0	44.8	40.8	43.0	2.0	1/18/01	9	39	39	43	2		
1	01/18/01	10.0	44.8	40.8	43.0	2.0	1/18/01	10	39	39	43	2		
1	01/18/01	11.0	44.8	40.8	43.0	2.0	1/18/01	11	39	39	43	2		
1	01/18/01	12.0	44.8	40.8	43.0	2.0	1/18/01	12	39	39	43	2		
1	01/18/01	13.0	44.8	40.8	43.0	2.0	1/18/01	13	39	39	43	2		
1	01/18/01	14.0	44.8	40.8	43.0	2.0	1/18/01	14	39	39	43	2		
1	01/18/01	15.0	44.8	40.8	43.0	2.0	1/18/01	15	39	39	43	2		
1	01/18/01	16.0	44.8	40.8	43.0	2.0	1/18/01	16	39	39	43	2		
1	01/18/01	17.0	44.8	40.8	43.0	2.0	1/18/01	17	39	39	43	2		
1	01/18/01	18.0	44.8	40.8	43.0	2.0	1/18/01	18	39	39	43	2		
1	01/18/01	19.0	44.8	40.8	43.0	2.0	1/18/01	19	39	39	43	2		
1	01/18/01	20.0	44.8	40.8	43.0	2.0	1/18/01	20	39	39	43	2		
1	01/18/01	21.0	44.8	40.8	43.0	2.0	1/18/01	21	39	39	43	2		
1	01/18/01	22.0	44.8	40.8	43.0	2.0	1/18/01	22	39	39	43	2		
1	01/18/01	23.0	44.8	40.8	43.0	2.0	1/18/01	23	39	39	43	2		
1	01/18/01	0.0	44.8	40.8	43.0	2.0	1/19/01	0	39	16	42	2		

Figure 16

Figure 17

Amb Temp	Suct T.....-25F.....										Suct T.....-35F.....										Suct T.....15F.....										Condenser Calculations			Annual Energy	
	Base Load.....					65% Comp Eff.....					Base Load.....					65% Comp Eff.....					Base Load.....					65% Comp Eff.....					Total Comp KW	fan req. KW	Comp kWh	Cond kWh	Total kWh
	Cond T	Subcooler T	Tin	Tout	Temp	s.c. load	Comp load	Comp KW	Temp	s.c. load	Comp load	Comp KW	s.c. load	Comp load	Comp KW	s.c. load	Comp load	Comp KW	Heat of Rejection (Btu/hr)	Heat of Rejection (Btu/hr)															
-25	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	27%	0.35	29	0.35	30	0.35	30	0.35	30	0.35								
-24	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	28%	0.35	29	0.35	30	0.35	30	0.35	30	0.35								
-23	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	28%	0.35	29	0.35	30	0.35	30	0.35	30	0.35								
-22	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	28%	0.36	29	0.36	30	0.36	30	0.36	30	0.36								
-21	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	29%	0.36	29	0.36	30	0.36	30	0.36	30	0.36								
-20	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	29%	0.37	29	0.37	30	0.37	30	0.37	30	0.37								
-19	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	29%	0.37	29	0.37	30	0.37	30	0.37	30	0.37								
-18	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	30%	0.38	29	0.38	30	0.38	30	0.38	30	0.38								
-17	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	30%	0.38	29	0.38	30	0.38	30	0.38	30	0.38								
-16	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	31%	0.39	29	0.39	30	0.39	30	0.39	30	0.39								
-15	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	31%	0.39	29	0.39	30	0.39	30	0.39	30	0.39								
-14	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	32%	0.40	29	0.40	30	0.40	30	0.40	30	0.40								
-13	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	32%	0.41	29	0.41	30	0.41	30	0.41	30	0.41								
-12	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	32%	0.41	29	0.41	30	0.41	30	0.41	30	0.41								
-11	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	33%	0.42	29	0.42	30	0.42	30	0.42	30	0.42								
-10	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	33%	0.42	29	0.42	30	0.42	30	0.42	30	0.42								
-9	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	34%	0.43	29	0.43	30	0.43	30	0.43	30	0.43								
-8	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	35%	0.44	29	0.44	30	0.44	30	0.44	30	0.44								
-7	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	35%	0.45	29	0.45	30	0.45	30	0.45	30	0.45								
-6	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	36%	0.45	29	0.45	30	0.45	30	0.45	30	0.45								
-5	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	36%	0.46	29	0.46	30	0.46	30	0.46	30	0.46								
-4	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	37%	0.47	29	0.47	30	0.47	30	0.47	30	0.47								
-3	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	37%	0.48	29	0.48	30	0.48	30	0.48	30	0.48								
-2	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	38%	0.48	29	0.48	30	0.48	30	0.48	30	0.48								
-1	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	39%	0.49	29	0.49	30	0.49	30	0.49	30	0.49								
0	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	40%	0.50	29	0.50	30	0.50	30	0.50	30	0.50								
1	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	40%	0.51	29	0.51	30	0.51	30	0.51	30	0.51								
2	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	41%	0.52	29	0.52	30	0.52	30	0.52	30	0.52								
3	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	42%	0.53	29	0.53	30	0.53	30	0.53	30	0.53								
4	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	43%	0.54	29	0.54	30	0.54	30	0.54	30	0.54								
5	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	44%	0.55	29	0.55	30	0.55	30	0.55	30	0.55								
6	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	44%	0.56	29	0.56	30	0.56	30	0.56	30	0.56								
7	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	45%	0.57	29	0.57	30	0.57	30	0.57	30	0.57								
8	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	46%	0.59	29	0.59	30	0.59	30	0.59	30	0.59								
9	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	47%	0.60	29	0.60	30	0.60	30	0.60	30	0.60								
10	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	48%	0.61	29	0.61	30	0.61	30	0.61	30	0.61								
11	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	49%	0.63	29	0.63	30	0.63	30	0.63	30	0.63								
12	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	50%	0.64	29	0.64	30	0.64	30	0.64	30	0.64								
13	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	52%	0.65	29	0.65	30	0.65	30	0.65	30	0.65								
14	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	53%	0.67	29	0.67	30	0.67	30	0.67	30	0.67								
15	55.5285	40.5	40.5	40.5	40.5	-	281.332	27.76	-	13.580	1.58	-	-	-	-	29.34	395.006	54%	0.69	29	0.69	30	0.69	30	0.69	30	0.69								

19/35

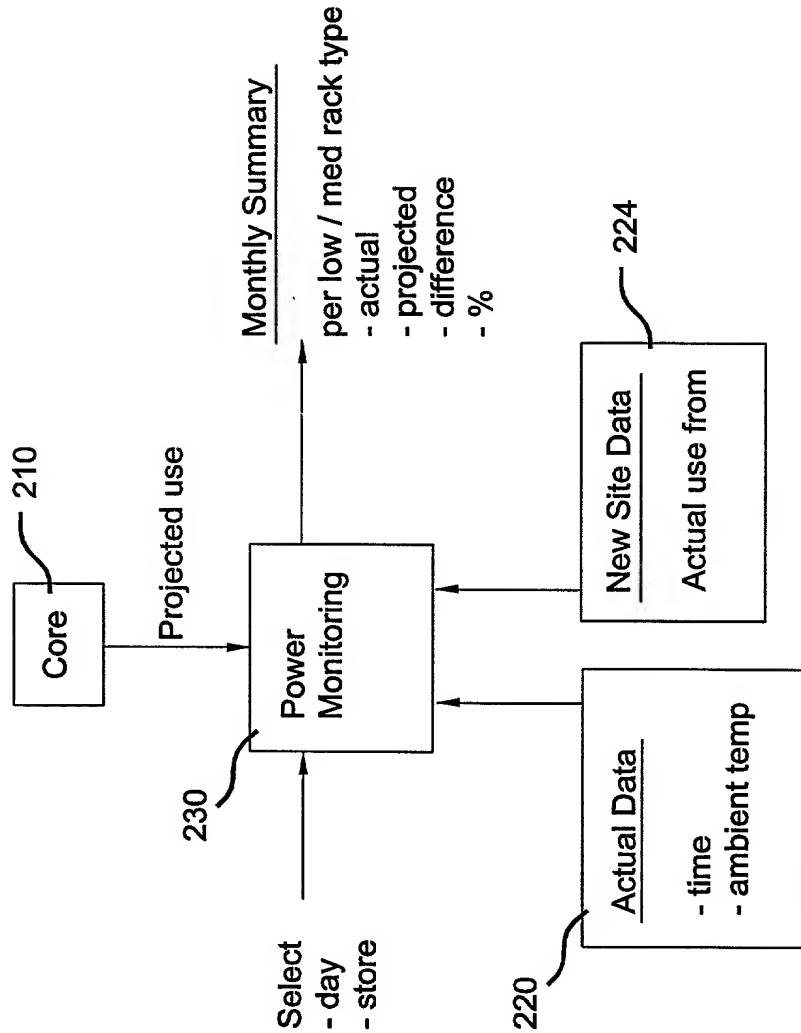


Figure 18

20/35

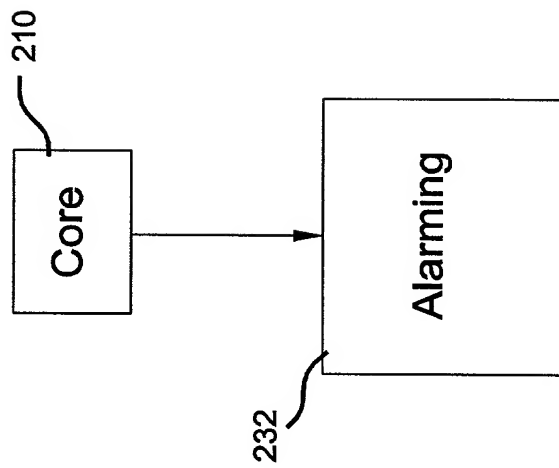


Figure 19

21/35

POWER MONITORING TOOL actual versus projected use									
<div> <div>Enter Beginning Day and Hour to start 24 hour summary</div> <div>Monthly data will begin on the specified date and run for 31 days</div> <div>Yearly data will be accumulated by actual month</div> <div>STORE NAME</div> <div>Beginning Day</div> <div>Beginning Hour (0-23)</div> <div>Date Index ... calculated, do not enter</div> <div>Click to Update Date and Time</div> </div>									
<div> <div>#22 - MONTHLY SUMMARY</div> <div> <div>LOW TEMP RACK</div> <div>Actual kWh Use 14,938</div> <div>Projected kWh Use 12,463</div> <div>Difference 2,475</div> <div>% Over/Under(-) Proj 19.9%</div> </div> <div> <div>MEDIUM TEMP RACK</div> <div>Actual kWh Use 15,840</div> <div>Projected kWh Use 9,692</div> <div>Difference 6,158</div> <div>% Over/Under(-) Proj 63.6%</div> </div> <div> <div>BOTH LOW AND MEDIUM</div> <div>Actual kWh Use 30,778</div> <div>Projected kWh Use 22,145</div> <div>Difference 8,633</div> <div>% Over/Under(-) Proj 39.0%</div> </div> </div>									
Comparison Charts available on next page									
ACTUAL HOURLY DATA for selected day									
Time of Day	Ambient Temp	Occupancy Factor	Low Temp Rack Total kWh	Medium Temp Rack Total kWh	Total Total kWh	Low Temp Rack Total kWh	Medium Temp Rack Total kWh	Total Total kWh	Running Tot Over Est kWh
1	45		33,825	25,120	58,945	40,381	41,500	81,881	22,936
2	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
3	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
4	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
5	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
6	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
7	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
8	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
9	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
10	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
11	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
12	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
13	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
14	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
15	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
16	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
17	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
18	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985
19	44		33,334	24,450	57,784	40,769	43,000	83,769	25,985

Figure 20

22/35

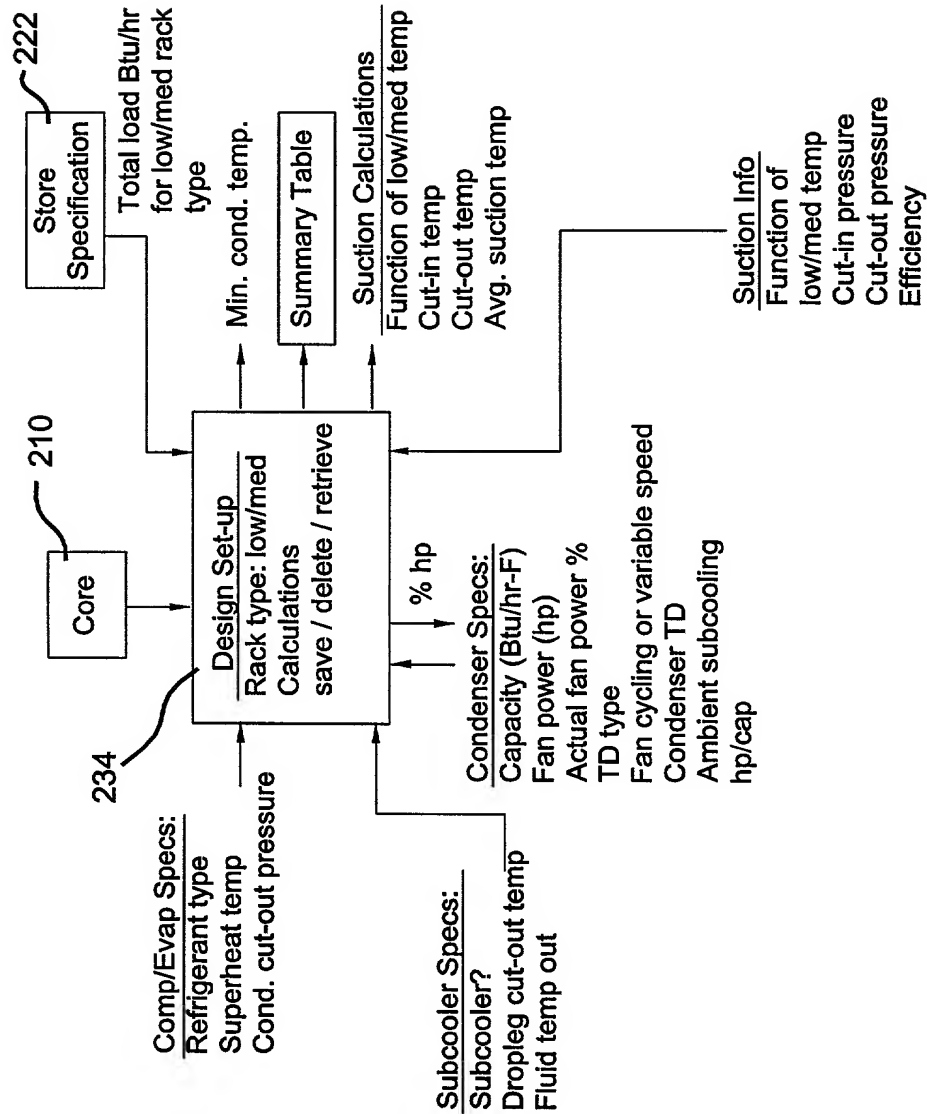


Figure 21

23/35

DESIGN TOOL SETUP				STORE:	#22	Period	All
SELECT SCENARIO, ENTER SPECIFICATIONS BELOW, AND SAVE SCENARIO							
<div style="float:left; width:60%;"> #1 BASE CASE - - High cond temp -LT Rack 2/4/01 807,550 kW #2 RETROFIT CAS - Rev Disch and Suct Press 2/4/01 769,018 kW #3 BASE CASE - - No Subcooler 3/10/01 1,125,150 kWh #4 Is available #5 Is available #6 Is available #7 Is available #8 Is available #9 Is available #10 Is available </div> <div style="float:right; width:35%;"> <input checked="" type="radio"/> Save <input type="radio"/> Delete <input type="radio"/> Retrieve </div> <div style="clear:both;"></div>							
CURRENT SCENARIO							
Scenario		Retrofit Case					
Comment		Rev Disch and Suct Press					
Date		2/4/2001					
Scenario#		2					
Period		All					
<i>Enter items in 'bold' above, before saving scenario</i>							
LOW TO MEDIUM TEMP RACK							
Comp/Evap. Spec.							
Suction #1	-25F	Loads	Suction #2	-35F	Loads	Suction #3	15F
Cut-in: Cut-out: Avg suction Comp Eff	14.0psig 14.0psig 65%	-25.5F -25.5F -25.5F	Cut-In: Cut-out: Avg suction Comp Eff	8.0psig 8.0psig -35.3F 65%	-35.3F -35.3F -35.3F	Cut-In: Cut-out: Avg suction Comp Eff	52.0psig 52.0psig 14.8F 65%
Total design load..... Diversity factor..... Actual load.....	281,332 100% 281,332		Total design load..... Diversity factor..... Actual load.....	13,580 100% 13,580		Total design load..... Diversity factor..... Actual load.....	- 85% -
RACKS				TOTAL			
LowTemp				350,372		362,452	
HighTemp				376,987		406,567	
Total				727,359		769,019	
<i>taken from Design Tool Results</i>							
CONDENSER CHARACTERISTICS				BTU/hr			
Capacity				18,000		Btu/hr-F	
Fan Power				2		hp	
Actual Fan Power				85%			
Select TD type below				fan cycling			
Condenser TD				20F			
Amb. Subcooling				15F			
hp/cap =				1/3		2/3	
%hp = (%cap)^x				2.71			

Figure 22

24/35

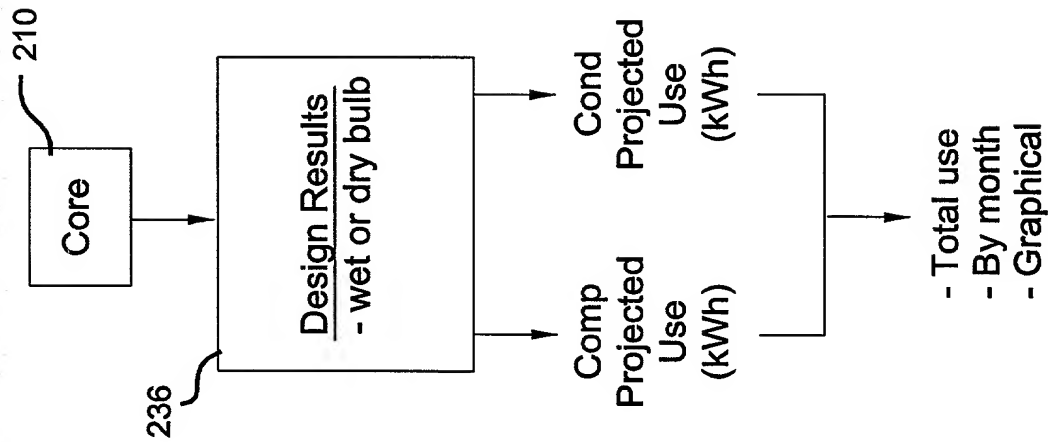


Figure 23

25/35

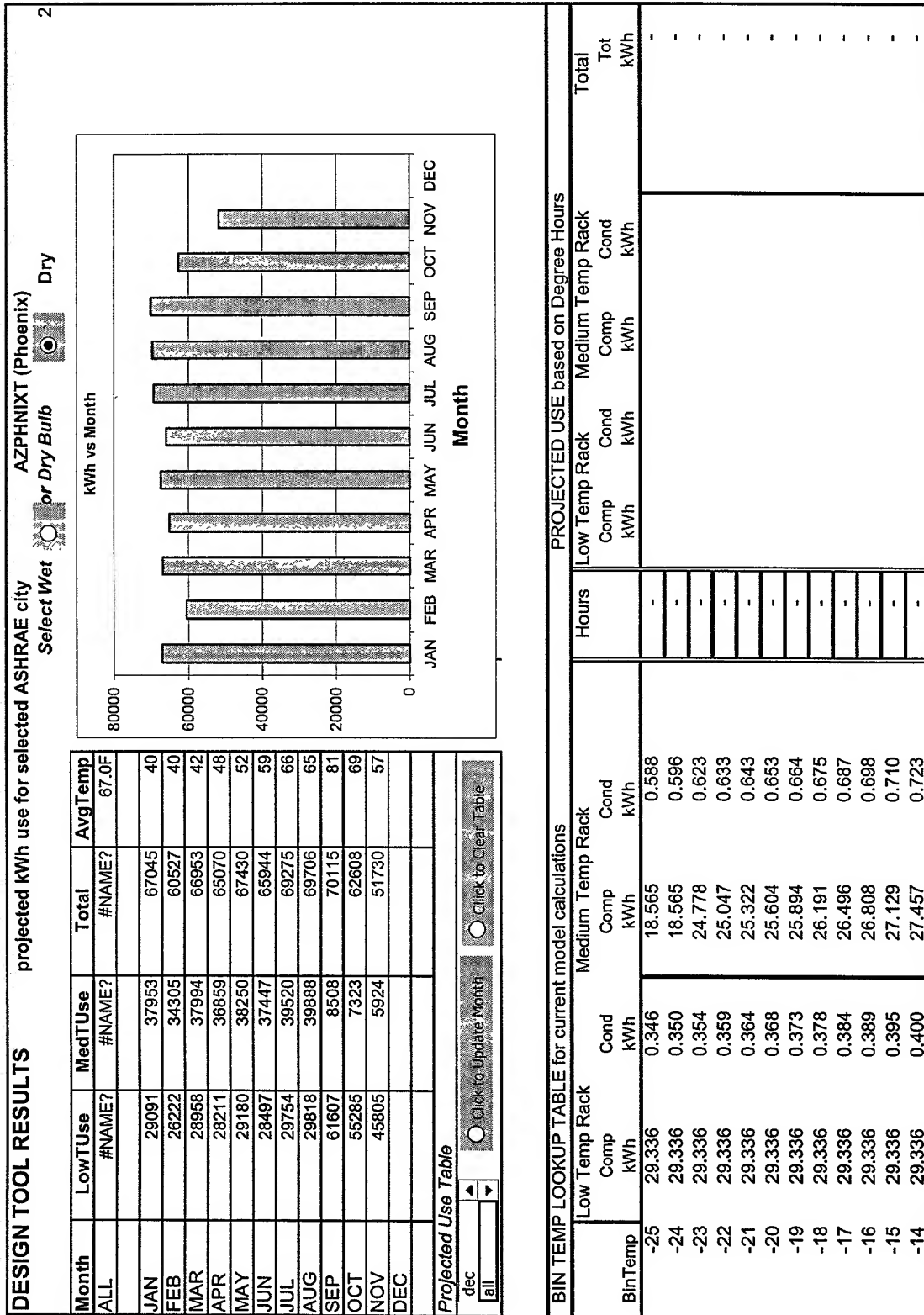


Figure 24

26/35

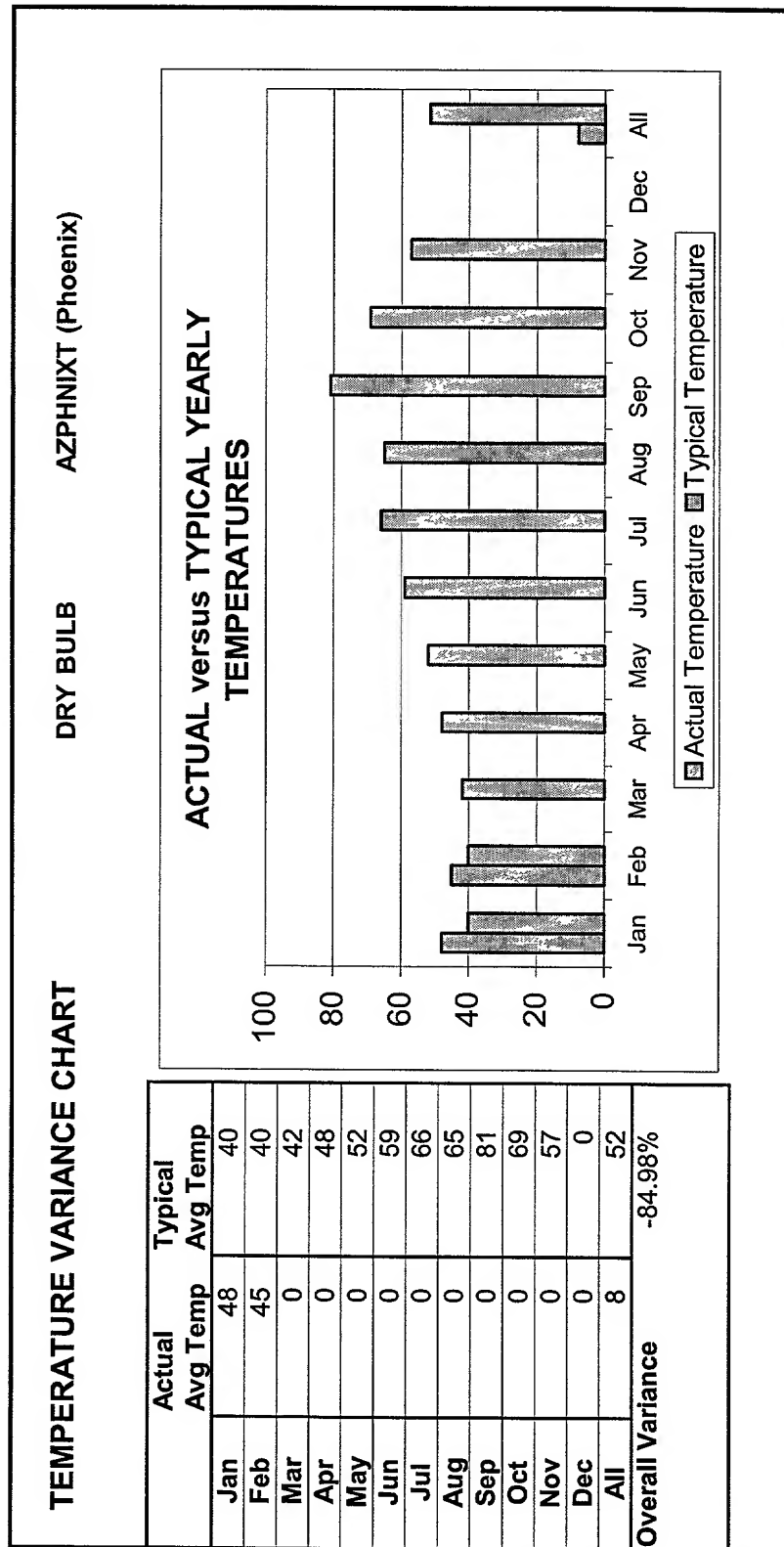


Figure 25

27/35

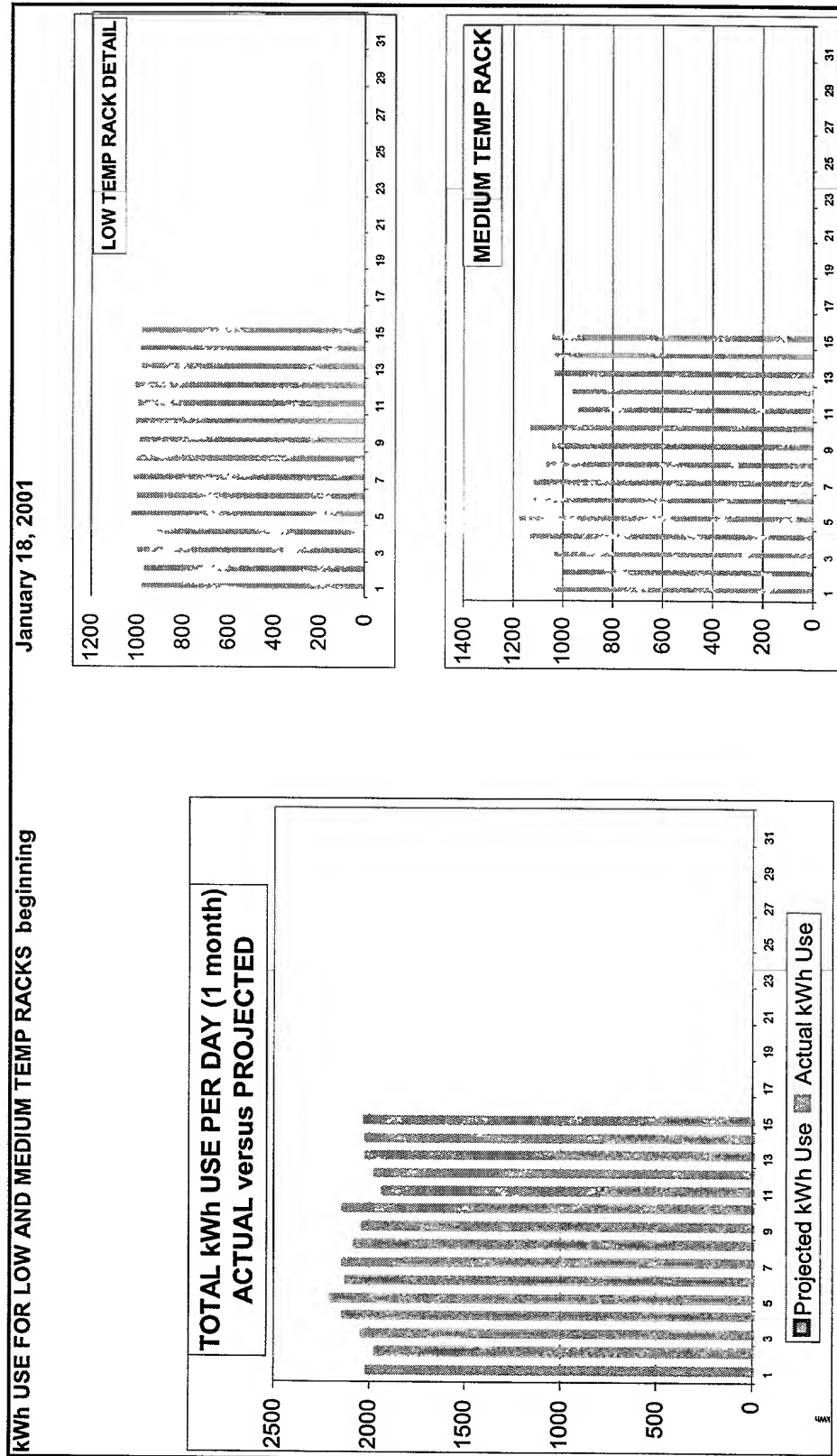
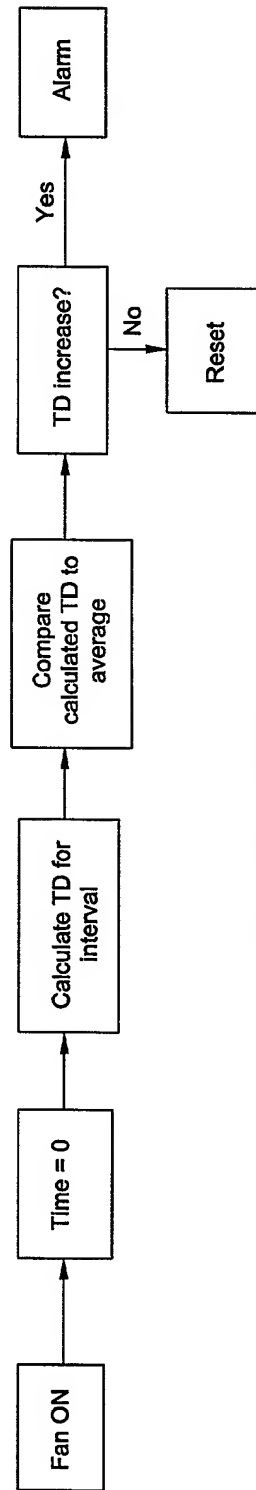
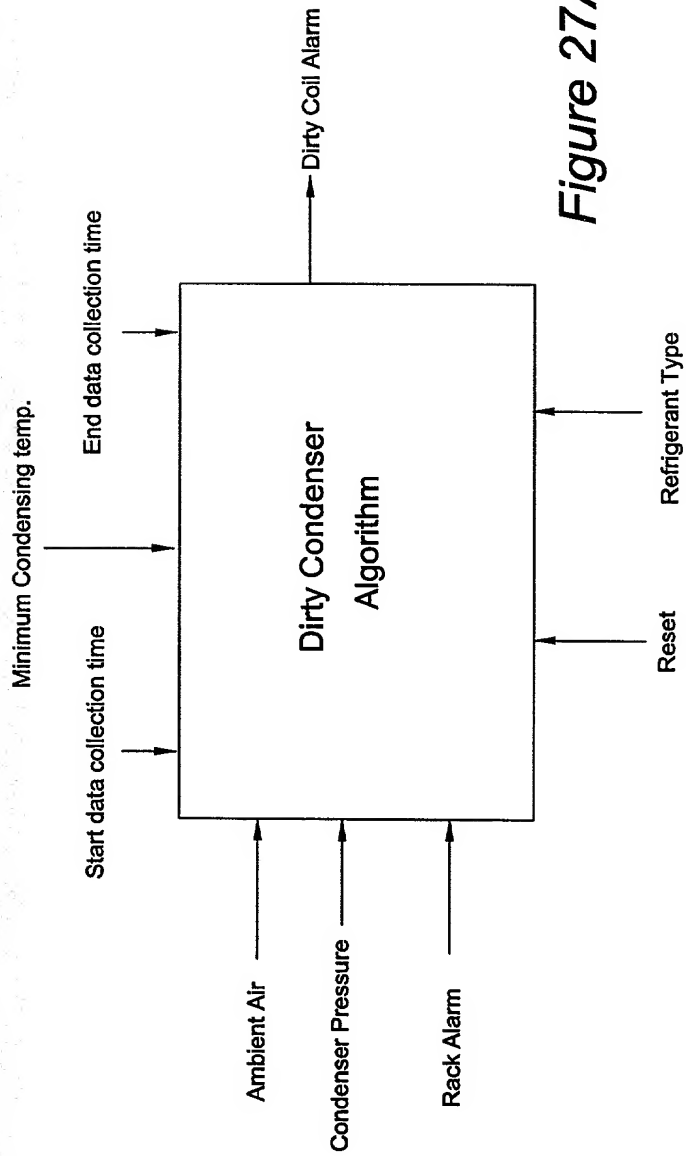


Figure 26

28/35



29/35

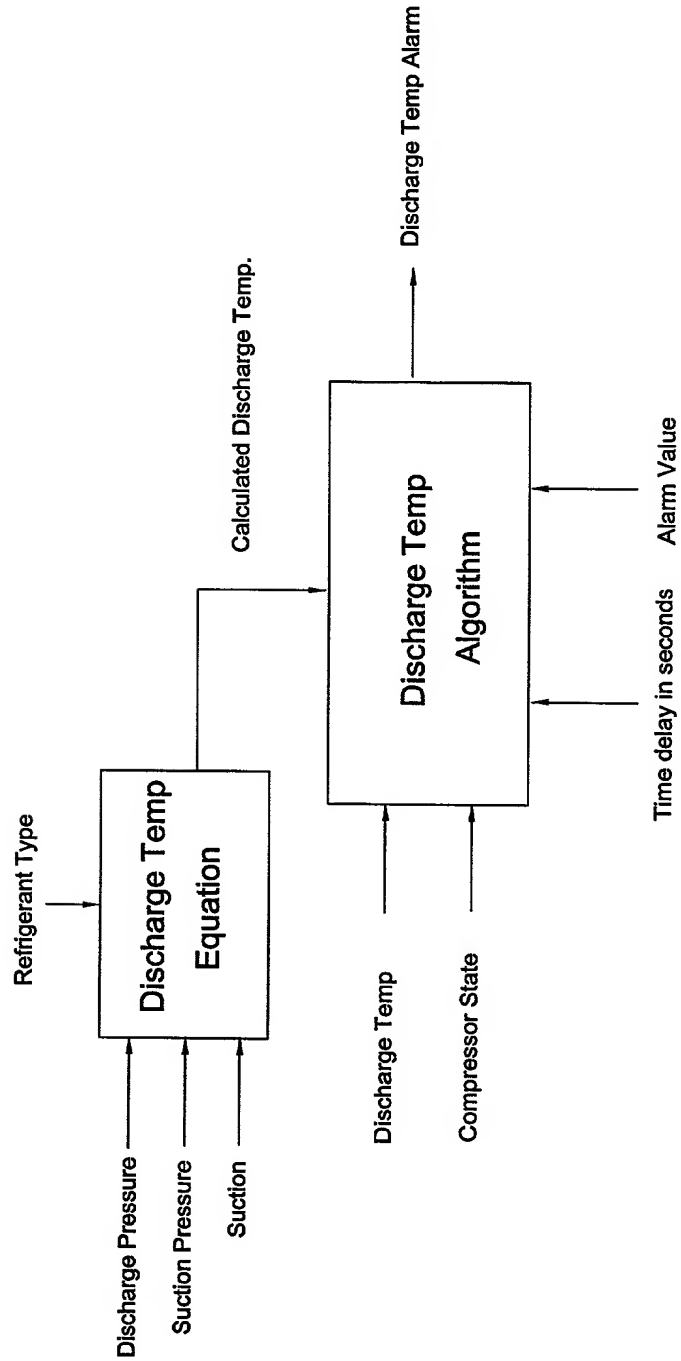


Figure 28

30/35

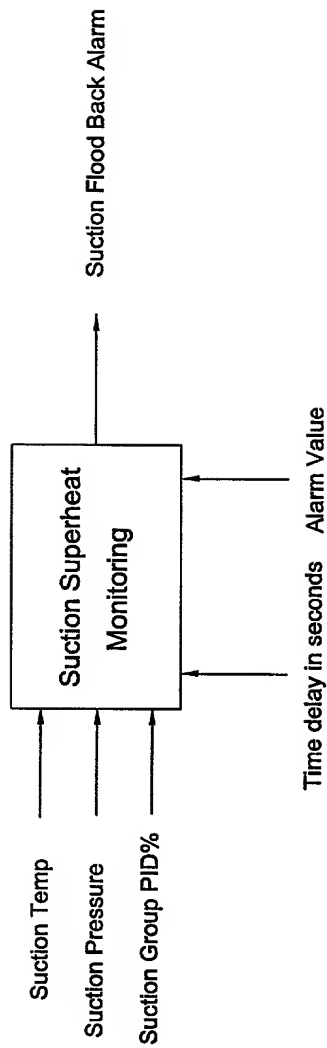


Figure 29A

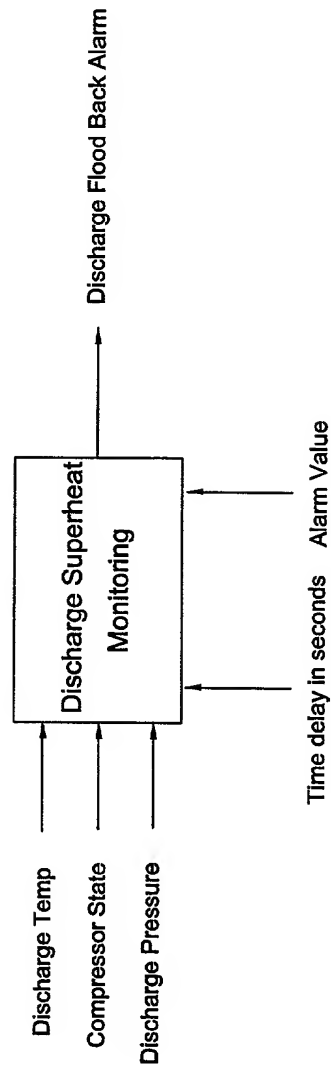


Figure 29B

31/35

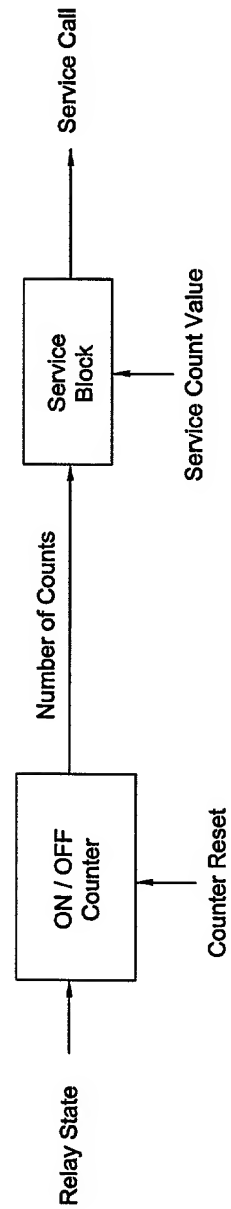


Figure 30

32/35

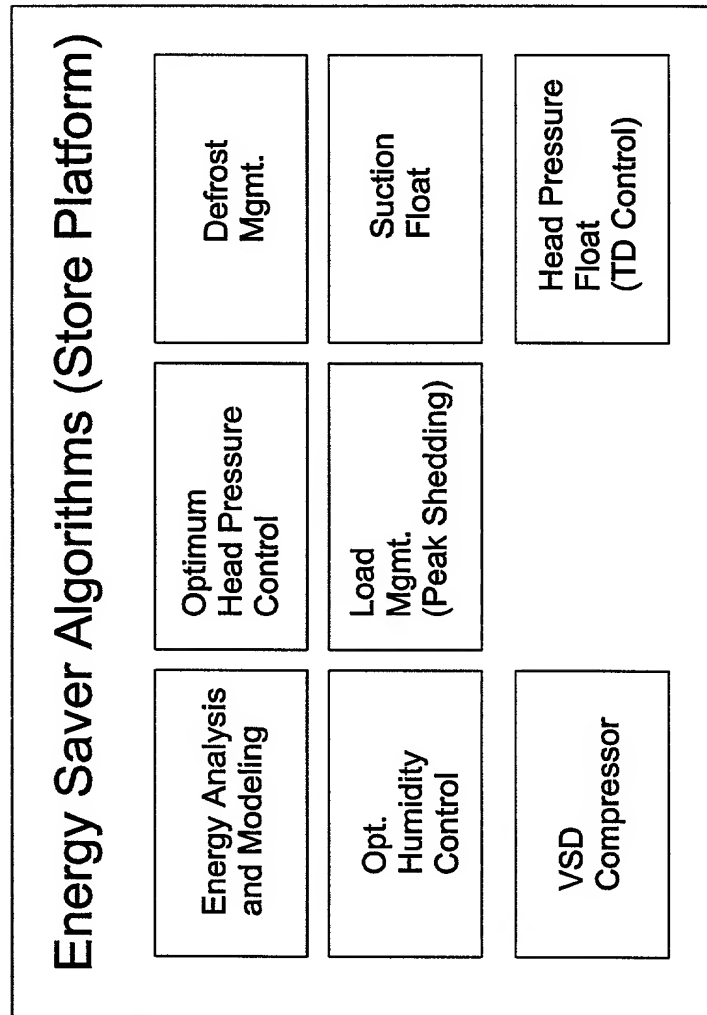


Figure 31

33/35

Actions									
Disc. Air Temp. Sensor Failed	Prod. Temp. Sensor Failed	Disc. Air Time-Temp. Exceeded	Prod Time-Temp. Exceeded	Disc. Air Degree-Min Exceeded	Prod Degree-Min. Exceeded	Prod FDA Time-Temp Exceeded	Spiller Count Exceeded	Pathogen Count Exceeded	Prod Temp. Cycling
×									Maintenance Advisory: Non-emergency repair
	×								Maintenance Advisory: Maintenance review remotely and respond as necessary
	×								Store Advisory: Store advised to manually check product temperatures, Maintenance Advisory: Non-emergency repair
×	×								Maintenance Alarm: Immediate action required. Store Advisory: advise manually check of product temperatures
								×	Maintenance Advisory: Review remotely and respond as necessary
			×	×					Store Advisory: Store advised to inspect / correct per procedures; Call maintenance if cannot resolve
					×				Store Alarm: Store must check product temperatures and condition; remove to other refrigerated storage as reqd.
						×			Store Alarm: Store must immediately inspect product in affected fixture; remove product per date code limits
								×	Store Emergency: Store must immediately remove and discard product per date code limits from affected fixture(s)

Figure 32

34/35

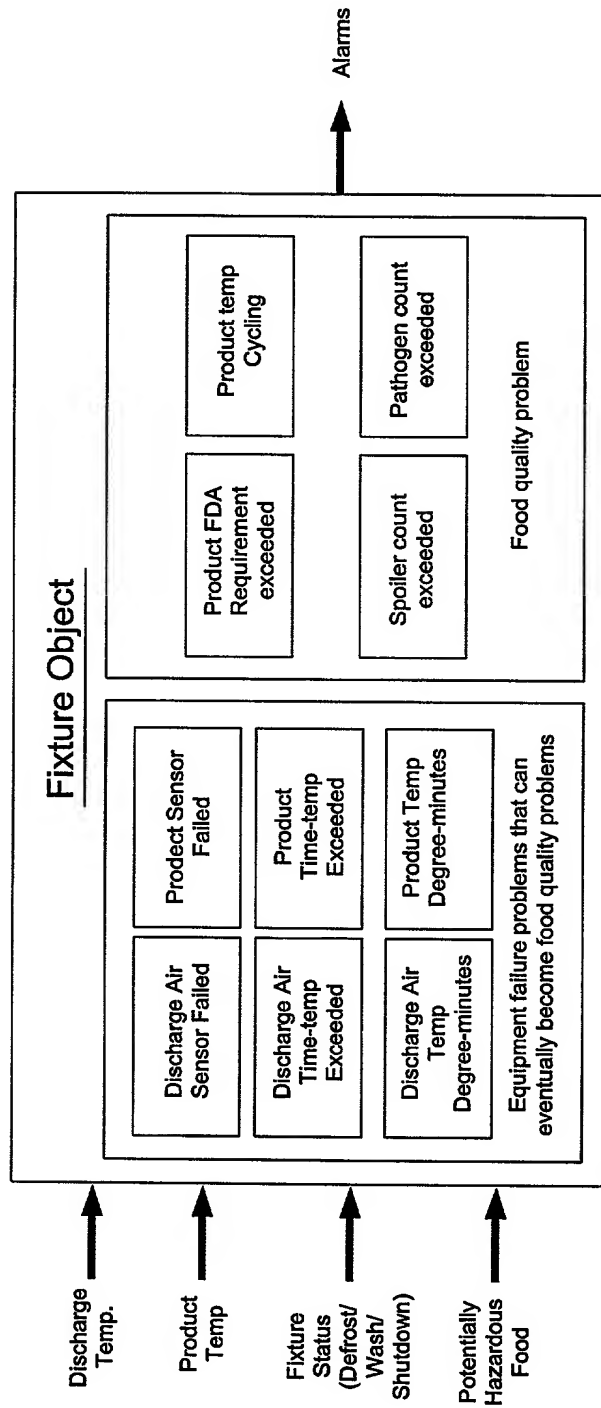


Figure 33

Figure 34